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ABSTRACT

This paper represents two intentions: to discuss the need for theoretical advance in generational studies, and to make suggestions about expanding the design repertoire of generational studies in the interests of these theory developments. First, because generational phenomena on the face seem intransigent to experiment, a comment on experimentation and the "real world" is made. Second, some research in social science generally that relates to the substantive field of generational studies is introduced. Third, a summary of some generational research is provided with a note on some weaknesses in the attendant designs. Finally, drawing from material introduced in the second section, some suggestions for experimentation as a means to deal with some of these problems are made. (Author)

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EXPERIMENTAL METHODS FOR STUDYING GENERATIONS

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Introduction

This paper represents two intentions: to discuss the need for theoretical advance in generational studies; and to make suggestions about expanding the design repertoire of generational studies in the interests of these theory developments. First, because generational phenomena on the face seem intransigent to experiment, a comment on experimentation and the "real world" will be made. Secondly, some research in social science generally that relates to the substantive field of generational studies will be introduced. Thirdly, a summary of some generational research will be provided with a note on some weaknesses in the attendant designs. Finally, drawing from material introduced in section II, some suggestions for experimentation as a means to deal with some of these problems are made. The underlying motivation for the suggestions here is my judgment that despite an enormous amount of research on generations now available, a number of crucial theoretical problems remain opaque and far from resolution and will remain so without some additional alternatives in designs to complement existing ones. The point at issue is not to replace existing designs but to explore an additional type -- experimentation with generations.

I. Experiments and Theory Testing/Development

There is an enormous amount of research on the question of how experiments relate to real life, whether they are as such valid, and whether they provide good theoretical knowledge of society. In all decisions in research the resolution depends on a balance of resources and what is implied by the substantive focus of interest. There are liabilities, of course, even when the situation warrants a particular research alternative. Such is the case with experiments. There are two basic reasons why a situation may call for an experiment. One is that there is a premium on the testing of theory. That is, either specific hypotheses are being tested or some theoretical model is being juxtaposed against some empirical information. Sometimes this is expressed as a comparison of verification as opposed to exploration in research (Snyder, 1963). The second reason is that a maximum amount of control is desired. This control might imply increased simplicity of some event, control over the operation of one or more variables (e.g., holding constant some variable, increasing or decreasing variation, prompting the appearance of an infrequent event), or enhanced visibility.

Few looking with a critical eye at the state of sociology would suggest that only theory testing needs to be done; and there are frequently criticisms made of experiments in that the emphasis on theory testing may be premature and that the control involved makes the fit between research and the "real world" tenuous. However admissible these arguments may be on some occasions, it is noteworthy that the very points that are made may be interpreted conversely. It is this latter fact that I would like to mention since to do so places the character of experiments in a useful perspective for the study of generations.

A. The Theoretical "Bias"

The position is frequently argued that experiments don't test the "real world" (Weick, 1971; Zelditch, 1971). They, instead, test theories. To the extent that the theory relates to the real world in the first place and to the extent that the experiment is a decent test of the thoery, to that extent the experiment can be useful in providing information about the "real world." In other words, so the argument goes, the theory is the bridge between the real

and the simulated settings. Is is just this refracted focus of experiments that is troublesome to critics of experiments and the conclusion is drawn that such refraction limits the generalizability of experimental research. Strikingly, however, when a realistic view of what theory is is held (say, a symbolic representation of a general state of affairs), the interest of experiments in theory testing is the facet that increases their generalizability. Science is a theoretical enterprise which means that it intends knowledge that is general. Hence, if a theory exists its worth is measured in terms of its applicability to a wide range of settings. That is, it is general. In this regard, if a theory is tested and verified by an experiment the basis exists for maximal generality rather than minimal generality.

B. The Control "Bias"

Arguments about the degree of control in experiments suggest that because a setting is simplified and the set of variables is limited the situation does not represent reality. However, from a slightly different perspective, in experiments the very realism can be maximized since the nature of control helps make evident the structural character of elements in an operating system and may allow time to enter more directly. Less cryptically, it is becoming increasingly evident that the systemic character of social life needs to be kept at the forefront of analysis. That is, elements of groups do not operate in isolation but in relation with others; a change in one will affect all the others. Theory intends to represent such a system and as such it tries to retain in its symbolic fabric such a set of connections. Naturalistic research says this is done by letting the system operate in situ. However, this is only part of the issue for it tends to beg the questions of the nature of the structural relations and the role of time. While theory development in a controlled setting needs to be tested in natural settings, there is a stage where the exact structural relations of a set of elements in a system need to be determined. Merely to say they operate together leaves unresolved the crucial question of how they are related. Even more importantly the degree of control afforded allows the introduction of time -- which is a strike for realism in this particular instance.[1]

II. Elements of Experimentation with Generations

Besides the general reasons for considering experimentation here, there are three lines of research that are developing and are indicative of the fact that general theoretical ideas about generations may be testable in laboratory settings. (1) The first has been concerned with translating macro-theoretical components into micro settings. Representatives of this tradition are found in some early work of Guy Swanson (1951) where he argued in principle for experimentation with small "populations" and where he engaged in such research (1953). A follow-up of Swanson's suggestions is that of Rose and Felton (1955) who sought both to create culture and to deal with its dissemination in a series of experiments involving three-person groups. (2) A second tradition began with the curious assertion in Sumner's classic statement on culture and his suggestion there that so long as a cultural element was accepted no matter how arbitrary it would be transmitted. Jacobs and Campbell (1961) tested this and found that there are limits on the transmission of cultural elements. They argued after noting the "fate" of arbitrary traditions through a series of artificial generations that a tradition will have to fulfill some functions for individuals and/or groups in order for it to be a durable cultural component. A follow-up study of this research by Weick and Gilfillan (1971) made some important elaborations on the contributions of

Jacobs and Campbell. (3) A third line of research that holds potential as a source of theoretical insight in the substantive area of generational studies is one based on intentions growing out of what has become general systems theory. Here -- representing the interests of systems theory to identify at least by analogy comparable processes and relationships in different types of systems - the suggestion is made about an analog between biological and cultural development (1956). Suggestions are provided here for experimentation with cultures.[2]

III. Intergenerational Relationships: A Brief Review of Literature

A. Studies Emphasizing Discontinuity

An early sociological treatment of the position of youth in society relative to other age segments is that of Talcott Parsons (1961; first published in 1942). He sees a "youth culture" developing in America characterized by a sort of pre-responsible state of romanticism and levity. He writes:

> It is at the point of emergence into adolescence that there first begins to develop a set of patterns and behavior phenomena which involve a highly complex combination of age grading and sex role elements. These may be referred to together as the phenomena of the 'youth culture'. Certain of its elements are present in pre-adolescence and others in the adult culture. But the peculiar combination in connection with the particular age level is unique and highly distinctive for American society (1961:91).

Kingsley Davis actually begins with intergenerational conflict as a premise and notes its high salience in Western society (1940). For him, there are constant intergenerational differences across cultures such as stage in the life cycle and decelerating rates of socialization. If social change occurs in conjunction with these constancies, then the cultural content that any one cohort learns will vary. The greater the rate of change (which he considers a variable across cultures), the greater the disparity in learning of successive generations.

The additional examples of imagery connoting discontinuity are James Coleman's Adolescent Society (1962) and Theodore Roszak's The Making of a Counter Culture (1969). These treatments are not comparable themselves with each other since they reflect markedly different research styles, kinds of data, and foci. However, they complement one another. Coleman's study develops the point that the high school is a social system apart from adult society. Roszak's treatment concerns primarily the religious and philosophical characteristics of the young in the 1960's. Coleman's study is localized at the social systemic level; Roszak's treatment is localized at the cultural level.

B. Studies Emphasizing Continuity

Symbols common with discussion emphasizing discontinuity, such as "parent-youth conflict", "adolescent society", and "counter culture", have prompted research and comment oriented to investigating the continuous facets of intergenerational relationships. An example of a portrayal at odds with those of Davis and Parsons is Elkin and Westley's "The Myth of Adolescent Culture" (1955). The latter two detect in the language referring to discontinuity, assumptions of a distinctive quality of stress associated with the adolescent

due to his position in the social structure between childhood and adulthood; the existence of a youth culture distinct from the culture of adults; and an "etiological and functional" connection between the culture and the psychological needs of the adolescents. They suggest their research results rule the conflict imagery, or generational discontinuity imagery, "mythical." In this way, the ground is prepared for an alternative, a continuity type of emphasis:

> [In our data], we do not find the structural etiological elements which allegedly produce this storm and stress. There is more continuity than discontinuity in socialization; there are few sharp conflicts between parents and children; and there are no serious overt problems of occupational choice or emancipation from authority figures. Considering the tenor of these data, along with the knowledge that the child, the adult, and the aged likewise have problems of adjustment, it seems logical to propose that the emphasis in discussing storm and stress among adolescents should be more on their participation in modern urban society than on the distinctive characteristics of their age-grade period (1955:684).

In a pattern similar to the emphasis contrast between Parsons and Davis on one hand and Elkin and Westley on the other, Bennett Berger (1963) has responded with considerable reserve to Coleman's portrayal of an "adolescent society".

C. Approaches Emphasizing Both Discontinuity and Continuity

Conceptual approaches and research results concerning the transmission of values between parents and adolescents remain somewhat disparate. Some consensus can be extracted, however, in the sense that there are indications of increasing caution employed in the area of study and increasing recognition that a wide range of dimensions and facets need to be given attention in the examination of intergenerational relationships. Some of this recognition occurs in the work of Richard Flacks and Kenneth Kenniston (1967). They provide similar suggestions that intergenerational differences may be not so much a matter of kind but of degree. Their research with college students and the parents of the students showed differences between generations, but the values of the younger generation tended to be a logical extension or simply a more extreme level of the values held by the parents. This suggests that attention to intergenerational relationships should be sensitive to both patterns of difference and commonality. A similar suggestion that similarity and contrast may simultaneously exist is provided in Melford Spiro's work with the Israeli kibbutzim (1963). On one hand, members of a kibbutz in large measure embody the prototype of intergenerational discontinuity in that the reason for their establishment of the settlement was a departure from their parents' values and style of life. Conversely, during the course of the development of kibbutz life several basic elements in common with those of their parents were seen to emerge.

These three bodies of literature can be characterized as hypotheses about the dominant nature of intergenerational relationships. One is that continuity is dominant; another is that discontinuity is dominant; and a third is that some mixture of patterns is occurring -- though without a clear articulation of what class of phenomena is continuous and what class is discontinuous.[3] Walter Wallace (1969) suggests theory in its most minimal and unqualified

sense is "any set of symbols that is claimed verifiably to represent and make intelligible specified classes of phenomena and one or more of their relationships" (3). Hence a beginning step to test theory with experiments here and to select from the three alternative hypotheses about transmission is to make clear what classes of phenomena might be in view. Fortunately, a developing conceptualization about intergenerational relationships indicates four ways generational continuities and discontinuities might be understood (Bengtson and Kuypers, 1971), and this can provide a beginning point to isolate classes in the sense in which Wallace speaks. One is the role a person plays in a social system and involves life cycle or age-status differences between generations. A second concerns the psychological development occurring at different stages in the life cycle, either cognitively (e.g., Piaget) or in terms of psychosexual development (e.g., Freud or Erikson). A third concerns the fact of different historical experiences that may affect a person's perspective (e.g., Mannheim, 1952). A fourth concerns changes that may have occurred in an institution over time that will lead to one generation experiencing the institution somewhat differently from the other.[4]

We now, of course, have some idea of what classes of phenomena are continuous and discontinuous and how these four generational components work from designs that have been most frequently used. There have been three basic kinds of designs with a number of variations. The first of these which I will call Type I investigates a cohort that has been defined by some criterion; then, comparisons are made with other cohorts. This is the most common, so a specification of some subtypes can be profitable. One is where no clear-cut older generation is identified but one is presumed as a reference point for comparison purposes (Type I-A); another is cross-sectional (Type I-B); another is where two or more generations which are biologically related are compared (Type I-C). A second basic type (Type II) is the longitudinal design where a single cohort is investigated at several points in time. A third fundamental type (Type III) occurs where elements of Type I and Type II are combined. A good example of this is a longitudinal design with cross-sectional controls. This allows for any mortality effects to be checked by comparing the panel with the cross-section.[5] These designs have, of course, been productive to an extent. However, they all pose two fundamental control problems which make them weak in dealing with crucial theoretical problems involving generations (for example, sorting out which class of phenomena is transmitted and which is not; and determining the relationship of the four components noted by Bengtson and Kuypers). One control problem is the common one of control of variables, and the status of the types is presented schematically in Figure A. The point is not in each case that information might not be available to handle the factors; rather it is that logically the design in question leaves open the possibility of the operation of the designated factor. To the extent that the logical lacunae exist there are weaknesses in the designs as a means for theoretical refinement and development.

FIGURE A

SCHEMATIC SUMMARY OF CONTROL PROBLEMS IN TRADITIONAL DESIGNS IN THE STUDY OF GENERATIONS

DESIGNS	FACTORS			
	History	Roles	Institutions	Dev.
Type I				
Type I-A	V	V	V	V
Type I-B	V	V	V	V
Type I-C	V	V	V	V
Type II	C	V	V	V
Type III	V	C	V	C

Note: "C" denotes the factor is controlled or controllable in a logical sense in the design; "V" denotes the factor is not controlled or controllable in a logical sense in the design.

A second crucial control problem not easily handled by the traditional designs is that of time. Even if the control problems involving the various factors noted above could be resolved the long time involved for generations to mature (say, at twenty years per generation) makes it extremely difficult to test the transmission hypotheses and the issue of the relationship among the four factors.[6] It is true, of course, that role changes or developmental factors may be investigated with much less time involved (by investigating someone just prior to and after a marriage or just prior to and after the birth of a child or just prior to and after loss or termination of employment or marriage, for example). However, even these patterns involve research resources that may be difficult to acquire. Beyond these life span and development factors, there is a crucial time problem with both the historical component and the change of institution component. It is difficult in an actual lifetime to control the timing of crucial events such as depressions, wars, and also the rate of institutional change (for example, recent changes in institutions affecting generations may have been predicted but their intensity and their exact pattern of evolution could not be predicted accurately: viz. , recent revision of the school system in France, computer technology, among other inventions, Vatican II in the religious sphere).[7]

IV. The Possibility of Experimental Generations

There has been an intention throughout this statement to underscore the fact that any research strategy has strengths and liabilities. It is not implied that experiments are different from such an equivocal evaluation. The emphasis has been simply that they do have some strengths in terms of generality and realism which are not often drawn out. Also, they have potential for adding information about generational relations. Because of these features the point has been made to add this alternative more regularly to the study of generational phenomena. What remains to round out this preliminary account is a set of a few guidelines for actual practice. While doing so and toward such practical ends, I will indicate what is logically necessary for experiments to be useful in providing information about generations.

If the argument that what is tested in experiments is theory elicits support, the minimum requirement for such a test is whether empirical implications made from the theory can be translated into operational strategies in a laboratory setting. Expressed differently, can the relevant variables of the theory be reproduced? In Section III above, some theoretical dimensions forming a model about generations were mentioned. Leaving aside the final issue of whether this is an exhaustive or the best set, the question posed here can be answered illustratively by determining the operational feasibility of testing for the effects of these variables. Though they may only be a preliminary set, any experiment that would not operationally represent some would surely be tangential to a large amount of existing literature on generations. Looking at the generational experiments just viewed in Section II the answer to the question of operational feasibility can be said to provide a provisional yes, at least in principle, and thus leave available the possibility of use of experiments in the study of generations.

A. Roles

Roles refer to a prescribed set of activities. They refer to a slot in a group that is characterized by rights and obligations and involves patterned activity and distinctive perspectives. Roles in the generational literature suggest that differences that appear between age pairs may be due

to differences in these slots. Hence, a mother and daughter are different because of their differing rights, responsibilities and perspectives. In the generational area, Bengtson and Kuypers (1971) and Wieting (1975b) have related such roles to different stakes in an institutionalized way of doing things. Importantly for this feasibility discussion, this role and stake issue is discussed in Weick and Gilfillan mentioned earlier (1971:181). "Thus, in situations where a bit of artificial culture is not blatantly unreal nor unwarrantedly arbitrary, and only a tendency to spontaneous innovation counteracts tradition, we would expect to see adherence to tradition increase with "age" and learning in an experimental microculture, as it seems to in real life."

B. Developmental

As indicated in the review of these dimensions above, the developmental element has been of specific concern of Piaget in regard to cognitive development and Freud and Erikson among others in regard to psychosexual development. However, it is a comprehensive notion that may imply a number of matters like experiential learning and knowledge of many kinds. Thus, it has been suggested in studies of generational relations that some of the tension and gap between generations is simply that the young have not learned what the old have. When they have the original discontinuities will be obviated. A common element of such knowledge might simply be language itself, and in a very creative suggestion Gerard et al. (1956) have examined how language itself can be manipulated in artificial generations. Using their suggestions the possibility is open for alternatively providing and withholding this aspect of intergenerational relations to see how this aspect of development bears on the relations between generations.

C. History

There is of course a danger in letting the differentiae of this dimension remain too flexible; if they are such a dimension loses its analytic utility. However, in the use of Mannheim (1952) and others (notably, Carlsson and Karlsson, 1970 and Inglehart, 1971) it has assumed considerable utility. The point in brief is that a generational group is defined by some commonly experienced unique event. Recent events might be the Second World War, participation in the Vietnam War or exposure to computers in public schools. As an example of how this dimension might be treated, we can look with profit at Rose and Felton (1955). Here the focus is on the influence of different historical experience. Actually the different histories become the categories of the experimental treatment.

D. Institutional Change

This generational element is a particularly knotty one. It poses the problem that any intergenerational pattern may be obscured by change in some institution (e.g., religion, education). Hence, either intergenerational commonality or intergenerational contrast may be distorted. Even though absolute differences may exist between generations, for example, the differences relative to some institution like the educational system or religion may be the same since the institution changed. Broadly, an institution means some set of rules (either norms or established ways of doing things) which are organized to fulfill some collective purpose. In the experimental literature mentioned in Section II, there are illustrations of two such institutions. In both cases, these provide examples for how institutions may be created,

manipulated and observed. In Weick and Gilfillan (1971), two sets of rules for problem solving activity are given to the generations. (See Moore and Anderson, 1969, for a theory of rules oriented to solving problems.) Language is an institution that is perhaps the most regularized of all. This is one reason for why it is selected by Gerard et al. (1956). Their attention to the language institution provides another excellent illustration of how this type of dimension could be handled in a generational experiment.

Conclusion and Directions for Continued Work

This has been an effort to suggest the utility of experimentation in the study of generations. It has to be clearly noted, again, that the intent here is not to be empirialist but constructive: it is to add to the repertoire of strategies investigating generational phenomena. Clearly, too, at every point this is a preliminary statement because besides the very sizable problems in the generational literature and the experimental literature in the social sciences, this statement attempts to relate the two literatures. In summary, the suggestion has been made on four levels: first, that there are important strengths in experimental strategies that suggest the strategies should be more generally considered; secondly, that out of experimental social science there are attempts now being made to study generational phenomena; thirdly, that theory and research in generational study has reached the point where these strategies should be exploited; fourthly, that key theoretical notions of the general literature on generations might be translated into research operations in experimental settings.

Finally, and in keeping with the programmatic and suggestive character of this statement, a few comments should be made sketching future directions of this line of work that seem potentially productive.

1. Linkages with Related Literature Traditions

There are two literature traditions which in methodological and theoretical features pose particularly fruitful possibilities for complementing the material in this paper. One of these is the current work on evolutionary theory and the attempt to find morphological and functional homologies between species across time. An older but stimulating statement about this is that of Simpson (1967; originally published in 1949); a newer and highly impressive statement is that of Wilson (1975). Another literature tradition that can be explored with profit as a complement to the material discussed here comes from research on aging and human development. There has not been a strong experimental tradition in the sociological and psychological areas of gerontology, the one exception being the long tradition of research on age related performance features (e.g., perception, problem solving, and memory). This research became particularly relevant to the sociological study of generational relationships with the work becoming available in the mid-1960's done by Schaie, Baltes,and Buss.

2. Devising Experimental Designs and Analysis Strategies

Because there is not a strong tradition of experimental work in social gerontology and there is hence not a rich set of experimental and quasi-experimental design prototypes to select from, considerable effort needs to be devoted to devising some alternatives that provide optimal blends of practical, theoretical, and substantive constraints. One such prototype is provided below as Figure B. An example of the procedure to be used here would be to create

a series of different cultures (usually in pairs) where people move through roles but the historical circumstance in each culture would vary. Each role experience might have a duration of 30 minutes and progression through the three roles of a life cycle would take 90 minutes. During a life cycle, tasks would be performed by the groups (made up of the three occupants of successive roles) such as problem solving or some focused discussion. The group composition would be changed every thirty minutes: as the eldest leaves he or she would be replaced by a new member. Each culture might last for a duration of 12 epochs. Observation of terminological use, communication patterns, problem solving strategies, e.g., would be made with videotape and/or measures at the end of each 30 minute session.

Diagrammatic Prototype of Experimental Design

γ = generational role

T = time or epoch

A through N = members of "cultures"

	Group 1 (Roles change/history$_1$)			Group 2 (Roles change/history$_2$)		
	γ_3	γ_2	γ_1	γ_3	γ_2	γ_1
T_1	A_1	B_1	C_1	A_2	B_2	C_2
T_2	B_1	C_1	D_1	B_2	C_2	D_2
T_3	C_1	D_1	E_1	C_2	D_2	E_2
T_4	D_1	E_1	F_1	D_2	E_2	F_2
T_5	E_1	F_1	G_1	E_2	F_2	G_2
T_6	F_1	G_1	H_1	F_2	G_2	H_2
T_7	G_1	H_1	I_1	G_2	H_2	I_2
T_8	H_1	I_1	J_1	H_2	I_2	J_2
T_9	I_1	J_1	K_1	I_2	J_2	K_2
T_{10}	J_1	K_1	L_1	J_2	K_2	L_2
T_{11}	K_1	L_1	M_1	K_2	L_2	M_2
T_{12}	L_1	M_1	N_1	L_2	M_2	N_2

Diagrammatic Prototype of Analysis

A. Same Role - Different History

$[E_1 \text{ to } N_1]_{\gamma_1} - [E_2 \text{ to } N_2]_{\gamma_1}$

$[E_1 \text{ to } M_1]_{\gamma_2} - [E_2 \text{ to } M_2]_{\gamma_2}$

$[E_1 \text{ to } L_1]_{\gamma_3} - [E_2 \text{ to } L_2]_{\gamma_3}$

B. Different Role - Same History

1. Cross Sectional

$[C_1 \text{ to } G_1]_{\gamma_1} - [H_1 \text{ to } L_1]_{\gamma_3}$

$[C_2 \text{ to } G_2]_{\gamma_1} - [H_2 \text{ to } L_2]_{\gamma_3}$

2. Longitudinal

$[C_1 \text{ to } L_1]_{\gamma_1} - [C_1 \text{ to } L_1]_{\gamma_2} - [C_1 \text{ to } L_1]_{\gamma_3}$

$[C_2 \text{ to } L_2]_{\gamma_1} - [C_2 \text{ to } L_2]_{\gamma_2} - [C_2 \text{ to } L_2]_{\gamma_3}$

3. Generational Experiments and General Theoretical Problems in Sociology

In the Cours de philosophie positive, Auguste Comte suggested that the study of generational relationships was the key focus of sociology.[8] Only occasionally have attempts been made within sociology to exploit this possibility(notably, the work of Davis, Ryder, Feuer, and Eisenstadt). It is suggested thirdly, then, as an area to do additional work, that the features provided by experiments (possibilities for replication and manipulation of time) may provide additional stimulus and possiblities for realizing some of the potential posed by Comte. Some domains where generational experiments may have particular relevance to general theoretical problems in sociology are the following. The point, of course, is not that these domains can be addressed solely by experimental work on generations. Rather, the emphasis is that the refinements and additional methodological tools provided by experiments can add to existing and stimulate new efforts to deal with these general topics from a generational perspective.

a. Sumner said that "mores can make anything right." Is this so? Or will cultural artifacts yield and wither in the face of practicality constraints and experiential knowledge that contradicts the mores? Relatedly, from the sociology of religion, given the existence of a belief in some religious doctrine that is desired to be transmitted across generations, is there a demonstrable amount of empirical information that contradicts the belief that can lead to the attenuation of the cultural artifact across generations?

b. Is the development of culture dependent on more than two people? "The dyad, therefore, does not attain that super-personal life which the individual feels to be independent of himself. As soon, however, as there is a sociation of three, a group continues to exist even in case one of the members drops out" (Simmel).

c. As suggested by Gerard et al. (1956), experimental study of generations may provide a unique way to test elements of the Whorf-Sapir hypothesis about the interplay between language and behavior. For example, what effects on problem solving by groups are evident when constraints are placed on the type of language that can be used by groups in interaction?

d. A very important problem in the philosophy of the social sciences is the relationship between diachronic factors in human groups and synchronic factors. This is most clearly embodied in the exchange between Sartre (Critique de la raison dialectique) and Lévi-Strauss (La Pensée Sauvage). Strikingly, the issues of diachrony and synchrony coincide with central generational components such as roles and history. This comparability opens the possibility of generational studies being a strategic site for addressing the diachrony/synchrony matter.

e. A problem in evolutionary studies (e.g., Wilson, 1975; Simpson, 1967), small group problem solving studies, and formal organizational research is the optimum nature of group organization for dealing with certain environmental conditions (e.g., rapid social change, abject stability, aliatory and random environments).

This issue has appeared in generational studies also, both in terms of its theoretical import and in terms of social policy decision making. Specifically, what is the relative adaptive advantage in various environments of the operation of a highly centralized organization (e.g., the traditional patriarchal family system) and the use of the heterogeneity of perspectives that the multiple roles in a family organization might provide (e.g., an equalitarian family system)? The import of this relative adaptability of organizational features in family systems is general in that it operates in any setting where age grading occurs (notably, university academic departments, organizations of professionals, trade work settings where seniority norms prevail, organizations of scientists).

Notes

[1]Statements and reserve about experiments in social science sometimes tend to be misdirected because of a tacit philosophical anthropology that is incomplete. On the matter of theory and generality, it may be argued that man is a problem solver and motivated by instrumental interest. However, it is also true that man is a theorist. In fact, much of incremental learning and practical acts are based on having first learned theoretical principles (e.g., generalizations from first learning from isolated experiences with levers, pulleys, wheels, etc.). On the matter of control, the argument may be made emphasizing the freedom and indeterminacy of human behavior and conclude that experiments constrain this and hence are too artificial. However, this underestimates the behavior of man as redundant, experimental (in a controlled sense), and even replicative. An important use of these anthropological assumptions about man as being theoretical and experimental as a basis for social science epistemology is, of course, G.H. Mead. A careful statement of this feature in Mead is provided in Kohout (1975).

[2]Many of the arguments here for experimentation would hold for general approaches to testing theories about generations using some artificial setting. So long as the theory has some specification it can be further developed by the control afforded by a variety of such settings which would include simulations (either man-model, man-computer or all computer based). See, for theory of such simulation, Barton, 1970 and some suggestions about simulations in family studies in Straus, (1973).

[3]The clarification of what classes of phenomena are available for intergenerational studies is itself a crucial issue and is addressed in another context (Wieting, 1975a).

[4]In another formulation (Inglehart, 1971), the first two of these are subsumed within a "life cycle" factor and the last two are subsumed within a "generational cohort" factor. In another context, the application of Bengtson and Kuypers to the interpretation of some intergenerational patterns has been attempted (Wieting, 1975b).

[5]There are, of course, a number of knotty technical data analysis problems in these designs. Consider the following matrix to serve as a basis for illustrating the potential array of observations. t = time; G = generation. In Type I, generically, the comparison is G_{12}-G_{22}. However, the composition of G_1 will vary in each of the three subtypes. In Type II, the comparison is G_{12}-G_{11}. In Type III: (a) Comparison of G_{12}-G_{11} can be made; (b) G_{12}-G_{22} can be made; and, importantly, (c) G_{11}-G_{22} can be made.

t_1	t_2	t_3	t_4
G_{11}	G_{12}	G_{13}	G_{14}
	G_{22}	G_{23}	G_{24}
		G_{33}	G_{34}
			G_{44}

[6]There is a developing body of literature that speaks of the components of generational relations existing in a variety of contexts: science, professions, art, etc. As such, research occurring in one area can have theoretical and methodological import for others. Theoretically, the system generalizations found in one setting can be applied -- at least tentatively -- to another. Methodologically, there are some areas where the time aspect is attenuated, such as student generations in an undergraduate or graduate curriculum. This presents in this respect a more manageable research site for testing general theory about generations. These issues are discussed in another context (Wieting, Griebel, and Altimore, 1975).

[7]Some of these issues are usefully discussed by Davis (1940) and Ryder (1965).

[8]Comte, 1969:387. "Le phénomène principal de la sociologie, celui qui établit avec la plus grande évidence son originalité scientifique, c'est-à-dire l'influence graduelle et continue des générations humaines les unes sur les autres, se trouverait dès lors essentiellement absorbé, ou du moins dissimulé au point d'être entièrement méconnu, en vertu de l'impossibilité manifeste où serait ainsi notre intelligence de deviner les principales phases effectives d'une évolution aussi complexe, sans l'indispensable prépondérance directe de l'analyse historique proprement dite."

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